

Status: Currently Official on 13-Feb-2025
 Official Date: Official Prior to 2013
 Document Type: Reagents
 DocId: GUID-E42B0B5E-0122-4E1E-9030-EC82C8C79C90_1_en-US
 DOI: https://doi.org/10.31003/USPNF_R2084_01_01
 DOI Ref: 02f8k

© 2025 USPC
 Do not distribute

Aluminum Oxide, Acid-Washed

(Alumina specially prepared for use in chromatographic analysis) CAS RN[®]: 1344-28-1.—White or practically white powder or fine granules. Very hygroscopic. Store in tight containers.

pH of Slurry: The pH of a well-mixed slurry of 5 g in 150 mL of ammonia-free and carbon dioxide-free water, after 10 minutes' standing, is between 3.5 and 4.5.

Loss on Ignition: Weigh accurately about 1 g, and ignite, preferably in a muffle furnace at 800° to 825°, to constant weight: it loses not more than 5.0% of its weight.

Silica: Fuse 500 mg with 10 g of potassium bisulfate for 1 hour in a platinum crucible, cool, and dissolve in hot water: not more than a small amount of insoluble matter remains.

Suitability for Chromatographic Adsorption: Dissolve 50 mg of *o*-nitroaniline in benzene to make 50.0 mL. Dilute 10 mL of the resulting solution with benzene to 100.0 mL, and mix (*Solution A*).

Weigh quickly about 2 (±0.005) g of specimen in a glass-stoppered weighing bottle, and rapidly transfer it to a dry, glass-stoppered test tube.

Add 20.0 mL of *Solution A*, insert the stopper, shake vigorously for 3 minutes, and allow to settle.

Pipet 10 mL of the clear supernatant into a 100-mL volumetric flask, dilute with benzene to volume, and mix (*Solution B*).

Determine the absorbances of *Solutions A* and *B* at 395 nm, with a suitable spectrophotometer, using benzene as the blank. Calculate the quantity, in mg, adsorbed per g of test specimen by the formula:

$$[2(1 - A_B/A_A)]/W$$

in which A_A and A_B are the absorbances of *Solutions A* and *B*, respectively; and W is the weight, in g, of the aluminum oxide. Not less than 0.3 mg of *o*-nitroaniline is adsorbed for each g of the aluminum oxide.

Auxiliary Information - Please [check for your question in the FAQs](#) before contacting USP.

Topic/Question	Contact	Expert Committee
ALUMINUM OXIDE, ACID-WASHED	Margareth R.C. Marques Principal Scientific Liaison	HDQ Headquarters

Most Recently Appeared In:

Pharmacopeial Forum: Volume No. Information currently unavailable

Current DocID: [GUID-E42B0B5E-0122-4E1E-9030-EC82C8C79C90_1_en-US](#)

DOI: https://doi.org/10.31003/USPNF_R2084_01_01

DOI ref: [02f8k](#)